

OFFICE OF FINANCIAL MANAGEMENT



STATE OF WASHINGTON

OCTOBER 2005

# EMPLOYER HEALTH INSURANCE DATA BOOK

# Washington State Employer Health Insurance Data Book

## Contents

---

<b>Introduction.....</b>	<b>1</b>
<b>Construction of Employer Health Insurance Database .....</b>	<b>3</b>
The Population of Firms .....	4
<b>Offer Rates .....</b>	<b>5</b>
<b>Enrollment, Eligibility, and Take-Up Rates.....</b>	<b>10</b>
Enrollment Rates .....	10
Eligibility Rates .....	12
Take-Up Rates .....	14
Eligibility, Take-Up and Enrollment Rates by Wage Quartiles .....	16
<b>Numbers Enrolled and Not Enrolled in Own Employer-Provided Health Insurance.....</b>	<b>17</b>
<b>Other Sources of Health Insurance Coverage Among Employed Persons .....</b>	<b>20</b>
<b>Health Insurance Premiums and Contributions.....</b>	<b>21</b>
Single Coverage.....	21
Family Coverage.....	24
Employer-Plus-One Coverage .....	27
A Note on Employee Contributions .....	29
<b>Employer Health Insurance Expenditures.....</b>	<b>30</b>
<b>Employee Health Care Contributions .....</b>	<b>32</b>
<b>Appendix I: Health Care Offer Analysis .....</b>	<b>34</b>
<b>Appendix II: Database Construction and Imputation Methodology .....</b>	<b>35</b>
Step 1: Restrict the Database to Private Sector Firms with at Least 2 Employees .....	35
Step 2: Merging Data From the <i>2004 Employee Benefits Survey</i> .....	35
Step 3: Imputing the Insurance Offer Status of Firms.....	35
Step 4: Imputing Health Insurance Enrollments in Firms.....	37
Step 4: Imputing Health Insurance Enrollments in Firms.....	37
Step 5: Imputation of Employer and Employee Health Insurance Expenditures .....	38

## Introduction

This report summarizes data contained in the *Washington State Employer Health Insurance Database*. The database includes estimates of health insurance offers, enrollments and expenditures for over 94,000 employers in Washington State. These employers include most *private sector* firms that have *two or more employees*. *Data for each firm was based on an imputation methodology that is described in Appendix II.*

The following health insurance information was imputed<sup>1</sup> for each firm:

- Health insurance offers to full-time employees, part-time employees, and dependents.
- Health insurance enrollment, eligibility, and take-up rates among firms that offer coverage.
- Total numbers enrolled and not enrolled in own employer-provided coverage.
- Health insurance premiums per enrollee for single, family and employee-plus-one coverage.
- Total health insurance expenditures and average expenditures per worker and per enrollee.
- Employee health care contributions.

The database also includes information on firm characteristics—industry, wages, employment levels, gross income, and various taxes and fund contributions.

Three main data sources were used to construct the database:

- Washington State Employment Security Department, *2004 Employee Benefits Survey*.<sup>2</sup>
- Washington State Office of Financial Management, Employment Security Department, Department of Revenue, Department of Labor and Industries; *2002 Business Tax & Premium Database*.
- U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, *Medical Expenditure Panel Survey—Insurance Component* (MEPS-IC).

---

<sup>1</sup> While health coverage information for most firms was imputed, the database does contain the reported health care offer status for roughly 7,000 firms that responded to the Employment Security Department's *2004 Employee Benefits Survey*.

<sup>2</sup> The Labor Market and Economic Analysis Branch of the Employment Security Department contributed substantially to this project by providing firm-level data from this survey.

The *Employee Benefits Survey* provides information on health insurance offers for private sector firms in the state. The *Business Tax Database* gives information on firm characteristics. Published data from the *MEPS* survey provide estimates for enrollment rates, eligibility rates, take-up rates, health insurance premiums, and employee contributions towards health insurance in Washington.

An analysis of these data (described in *Appendix I*) suggests that average wage levels, firm size and industry explain much of the variation in health care offer rates across employers. Offer rates were imputed for firms based on these three characteristics. Among firms that offer coverage, the numbers of workers enrolled were estimated using enrollment rates reported by *MEPS*; these rates were allowed to vary by firm size and industry. Applying *MEPS* data on average premiums per enrollee yielded estimates of employer health care expenditures. Premiums were also allowed to vary by firm size, industry, and type of coverage (single, family, employee-plus-one).

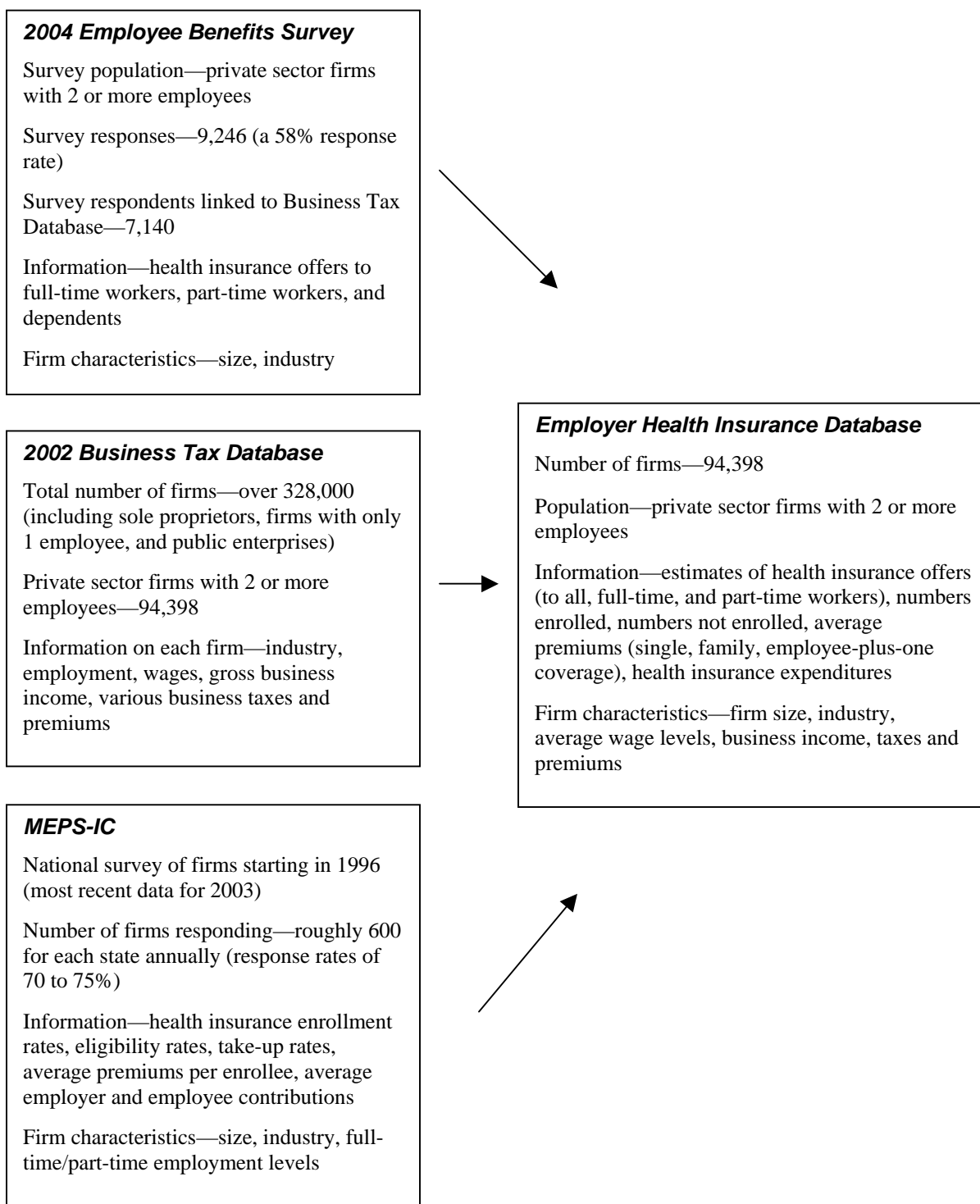
*The offer rates, enrollments and expenditures reported here are only estimates, and these estimates are subject to potential sources of error.* The estimates rely heavily on two surveys. The 2004 *Employee Benefits Survey* has a large sample, and although the response rate was 58 percent, there is no evidence of substantial response bias.<sup>3</sup> *MEPS* is a national survey of employers. The sample is designed to support state-level estimates, but the sample sizes for each state are relatively small and estimated parameters can have large standard errors. Three-year moving averages of *MEPS* rates are used in order to provide more precise and stable estimates. Still, the reliability of the estimates declines as you drill down into industry and firm size categories.

Finally, the estimates are restricted to the population of firms included in the *Employee Benefits Survey*—private sector firms with two or more employees. We do not provide estimates of health care coverage among sole proprietors and firms with only one employee.

---

<sup>3</sup> See the *Technical Appendix* for a discussion.

## Construction of Employer Health Insurance Database



## The Population of Firms

The estimates in this report are for the 94,398 private sector firms with two or more employees included in the *2002 Business Tax & Premium Database*. Public sector employers (e.g., local and state governments, school districts, public universities) are excluded. Nonprofit organizations are included.

The unit of analysis is the firm, rather than the establishment. Firms with multiple locations are reported as one company.

Number of Firms and Workers in the <i>Employer Health Insurance Database</i> Private sector firms in Washington with 2 or more employees (2002)				
	Firms		Employees	
	Number	Percent	Number	Percent
All Firms	94,398	100%	2,064,975	100%
Firm Size				
2 - 9	66,093	70%	280,799	14%
10 - 24	16,537	18%	254,930	12%
25 - 49	6,014	6%	208,165	10%
50 - 99	2,989	3%	207,692	10%
100 and above	2,765	3%	1,113,389	54%
Industry*				
Agriculture	5,188	5%	70,273	3%
Manufacturing & mining	5,776	6%	280,408	14%
Construction	12,488	13%	133,503	6%
Utilities & transportation	2,511	3%	78,796	4%
Wholesale trade	6,734	7%	107,564	5%
Finance, insurance, real estate	7,153	8%	161,900	8%
Retail trade	11,106	12%	293,175	14%
Professional services	20,973	22%	521,009	25%
Other services	22,469	24%	418,347	20%
<p>* Agriculture includes forestry and fishing.  Finance, insurance, real estate includes management of companies.  Professional services includes information, professional and technical services, educational services and health care.  Other services includes administrative services, arts/entertainment/recreation, accommodation and food services, and other services (except public administration)</p>				

## Offer Rates

Offer rates refer to the percentage of firms that provide health care insurance. The estimates presented in this report are based on information from the Employment Security Department's *2004 Employee Benefits Survey*. These estimates are consistent with national rates reported in the Kaiser/HRET *2004 Employer Health Benefits Survey*.

Estimates of Employer Health Insurance Offer Rates (Percent of firms offering coverage to any workers)			
	Washington EHI Database*		US Kaiser/HRET 2004 Survey**
Firm Size		Firm Size	
2 - 9	54	3 - 9	52
10 - 24	75	10 - 24	74
25 - 49	87	25 - 49	87
50 - 99	95	50 - 199	92
100+	97	200+	99
All Firms (2+)	62	All Firms (3+)	63
<p>* These are the estimates from this study, based on information from the state's <i>Employee Benefits Survey</i>. The survey includes private sector firms with 2+ employees. The survey response rate was 58%.</p> <p>**The Kaiser/HRET survey includes firms with 3 or more employees. The survey response rate (for the question that determined offer rate estimates) was 78%.</p>			

Table Reads: Sixty-two percent of firms offer health insurance to full-time employees, but only 13 percent offer it to part-time employees.

Private Sector Firms With Two or More Employees That Offer Health Insurance: Washington State				
	Percent of Firms Offering to:			
	Full-time Employees	Dependents of full-time employees	Part-time employees	Dependents of part-time employees
All Firms	62	49	13	11
Firm Size				
2 - 9	54	39	10	7
10 - 24	75	65	17	15
25 - 49	87	80	22	21
50 - 99	95	90	24	23
100 and above	97	92	33	32
Wage Quartiles*				
Lowest 25% of firms	29	19	5	4
Second 25% of firms	51	35	10	8
Third 25% of firms	78	63	17	14
Highest 25% of firms	91	81	21	18
Industry**				
Agriculture	32	23	2	2
Manufacturing & mining	81	69	18	17
Construction	55	48	10	9
Utilities & transportation	63	54	7	6
Wholesale trade	86	78	17	13
Finance, insurance, real estate	70	55	17	15
Retail trade	56	42	9	7
Professional services	76	59	21	17
Other services	48	34	9	6
<p>* Wages refer to average wages (total wages divided by number of employees). The lowest 25% of firms have average annual wages of less than \$13,044. The next group has average wages from \$13,044 to \$21,774. The third group has average wages from \$21,774 to \$34,020. The highest group has average wages above \$34,020. Note that these averages include part-time workers.</p> <p>** Agriculture includes forestry and fishing.  Finance, insurance, real estate includes management of companies.  Professional services includes information, professional and technical services, educational services and health care.  Other services includes administrative services, arts/entertainment/recreation, accommodation and food services, and other services (except public administration)</p>				



Table Reads: While 62 percent of firms offer insurance to full-time employees, 88 percent of all workers are employed in these firms. (Note that not all of these 88 percent are full-time workers and not all are eligible.)

Percent of Firms Offering Health Insurance and the Percent of Employees in These Firms: Washington State				
	Firm Offers Health Insurance to:			
	Full-time Employees	Dependents of full-time employees	Part-time employees	Dependents of part-time employees
Percent of Firms	62	49	13	11
Percent of Employees	88	81	29	27
Estimates refer to private sector firms with 2 or more employees.				

Table Reads: Thirty-eight percent of firms do not offer health insurance, 12 percent offer it to only their full-time employees, 38 percent offer to full-time employees and their dependents, and 10 percent offer to full-time and part-time employees and their dependents.

Offer Status of Private Sector Firms With Two or More Employees: Washington State (Percent of Firms)					
	No Offers	Full-time employees only	Full-time employees and dependents	Full-time and part-time employees only	Full-time and part-time employees & dependents
All Firms	38	12	38	2	10
Firm Size					
2 - 9	47	14	31	2	7
10 - 24	25	12	49	1	13
25 - 49	13	7	61	1	18
50 - 99	6	4	67	1	22
100 and above	3	4	61	1	31
Wage Quartiles*					
Lowest 25% of firms	71	10	14	1	4
Second 25% of firms	49	15	27	1	7
Third 25% of firms	23	14	48	2	13
Highest 25% of firms	10	10	62	1	17
Industry**					
Agriculture	68	9	22	0	1
Manufacturing & mining	20	12	52	1	14
Construction	45	7	39	1	8
Utilities & transportation	37	10	46	0	6
Wholesale trade	14	7	63	2	14
Finance, insurance, real estate	32	13	40	2	13
Retail trade	43	15	33	2	7
Professional services	24	16	41	2	17
Other services	52	13	27	2	6
<p>* Wages refer to average wages (total wages divided by number of employees).</p> <p>** Agriculture includes forestry and fishing.</p> <p>Finance, insurance, real estate includes management of companies.</p> <p>Professional services includes information, professional and technical services, educational services and health care.</p> <p>Other services includes administrative services, arts/entertainment/recreation, accommodation and food services, and other services (except public administration)</p>					

Table Reads: Among small (<50), low-wage (lowest 25%) firms in manufacturing, only 44 percent offer health insurance. Among small, high-wage (highest 25%) firms in this sector, however, 96 percent offer health insurance.

Percent of Private Sector Firms With Two or More Employees That Offer Health Insurance To Any Workers by Industry*: Washington State				
	Wage Quartiles**			
	Lowest 25%	Second 25%	Third 25%	Highest 25%
Agriculture, forestry, fishing				
Small Firms (< 50)	16	32	56	52
Large Firms (50+)	57	69	74	89
Manufacturing & mining				
Small Firms (< 50)	44	49	94	96
Large Firms (50+)	na	83	96	100
Construction				
Small Firms (< 50)	18	28	62	82
Large Firms (50+)	na	na	95	99
Utilities & transportation				
Small Firms (< 50)	37	43	70	69
Large Firms (50+)	na	93	100	100
Wholesale trade				
Small Firms (< 50)	35	58	91	95
Large Firms (50+)	na	67	98	100
Finance, insurance, real estate				
Small Firms (< 50)	38	52	80	90
Large Firms (50+)	na	97	99	100
Retail trade				
Small Firms (< 50)	29	51	83	91
Large Firms (50+)	97	98	94	100
Professional services				
Small Firms (< 50)	42	65	82	93
Large Firms (50+)	94	98	100	100
Other services				
Small Firms (< 50)	23	50	76	89
Large Firms (50+)	79	91	97	98
<p>'na' refers to cells in which there are very few firms and no estimate is reported.</p> <p>** Wages refer to average wages (total wages divided by number of employees).</p> <p>*Finance, insurance, real estate includes management of companies.</p> <p>Professional services includes information, professional and technical services, educational services and health care.</p> <p>Other services includes administrative services, arts/entertainment/recreation, accommodation and food services, and other services (except public administration)</p>				

## Enrollment, Eligibility, and Take-Up Rates

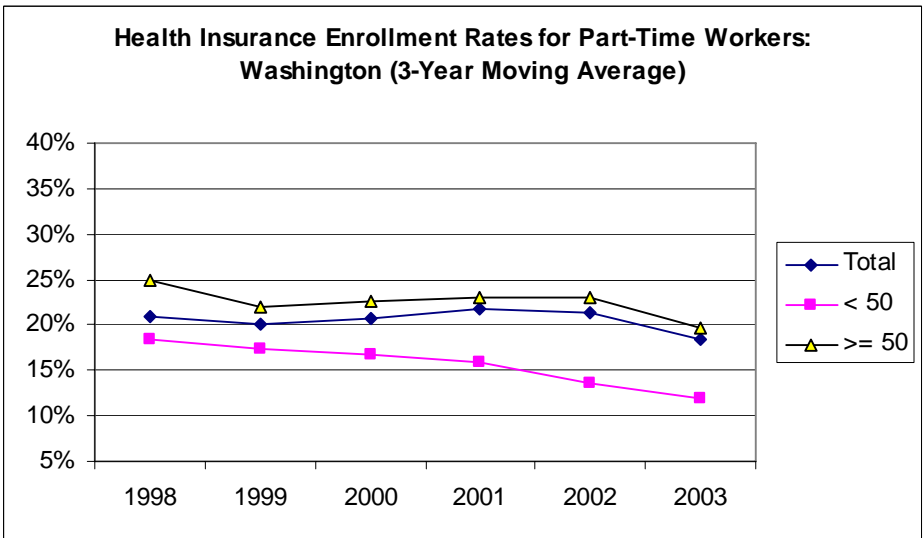
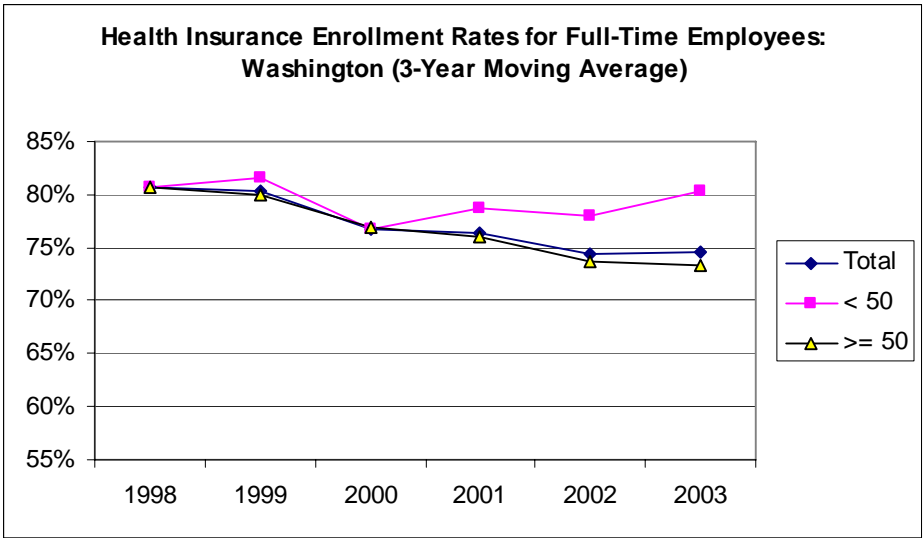
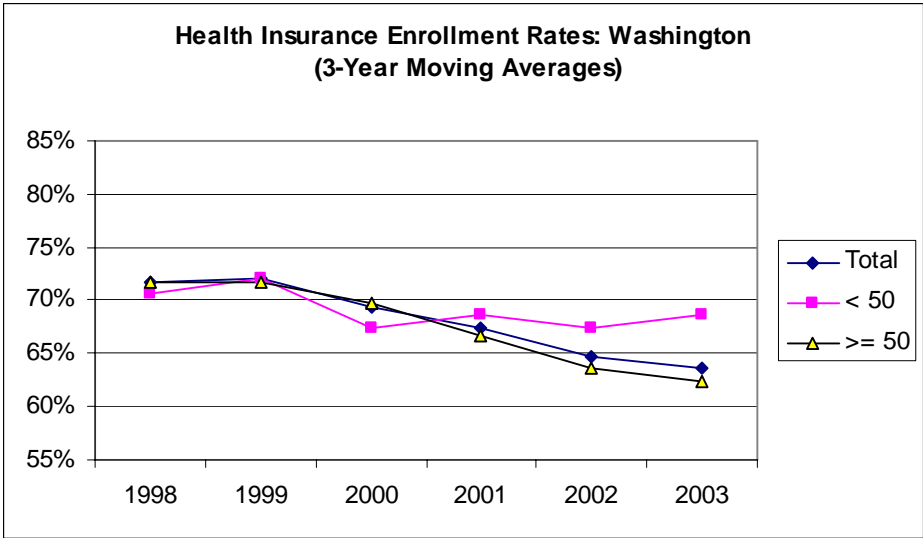
The enrollment rate is the percentage of workers who are enrolled in employer-provided health insurance *among those in firms that offer coverage*. Enrollment rates, in turn, depend upon eligibility and take-up rates. The eligibility rate refers to the percentage of workers who are eligible for health insurance among those in firms that offer insurance. The take-up rate is the percentage of eligible employees who enroll. The rates presented below are estimates based on *MEPS* data. Given the relatively small sample sizes for any given state, three-year moving averages are used.

### Enrollment Rates

Table Reads: Among employees in Washington firms that offer health insurance, 64 percent are enrolled.

Health Insurance Enrollment Rates (Averages for 2001-2003) (Percentage of employees enrolled in coverage among those in firms that offer)							
Washington				US			
Firm Size	All Employees	Full-time	Part-time	Firm Size	All Employees	Full-time	Part-time
Total	64	75	18	Total	62	73	15
<50	69	80	12	<50	61	72	11
50+	62	73	20	50+	63	73	16
Source: MEPS-IC							

Health Insurance Enrollment Rates (Averages for 2001-2003) Washington State									
	All Workers			Full-Time			Part-Time		
	All Firm Sizes	<50	50+	All Firm Sizes	<50	50+	All Firm Sizes	<50	50+
Agriculture	56	59	54	67	72	66	18	12	20
Manufacturing & mining	82	81	80	84	84	83	30	17	30
Construction	65	74	60	68	76	63	22	23	20
Utilities & transportation	73	73	70	79	80	78	25	12	26
Wholesale trade	78	80	76	81	85	80	18	17	20
Finance, insurance, real estate	77	80	74	82	87	80	32	19	34
Retail trade	49	65	45	66	78	63	17	9	18
Professional services	68	74	66	77	86	75	29	15	33
Other services	43	50	41	60	71	57	8	7	8
All Industries	64	69	62	75	80	73	18	12	20
Source: MEPS-IC									
Estimates assume variation in rates across industries is the same as that observed for the US.									

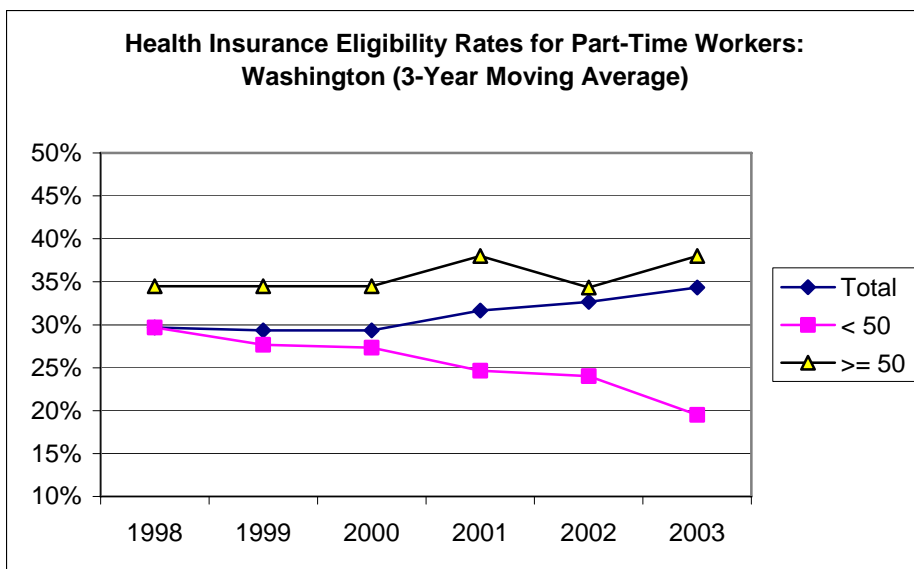
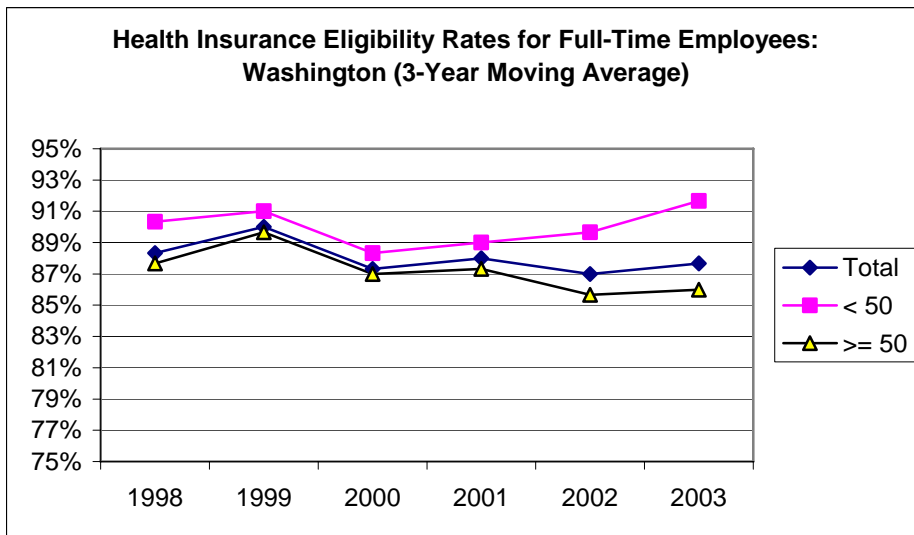
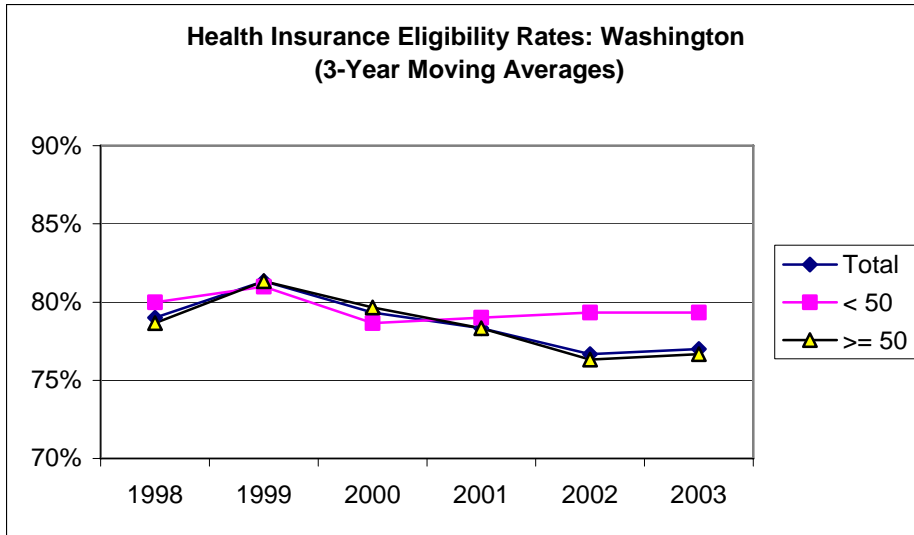


## Eligibility Rates

Table Reads: Among employees in firms that offer health insurance, 77 percent are eligible.

Health Insurance Eligibility Rates Among Firms that Offer Coverage: Washington (Averages for 2001-2003)			
Firm Size	All Employees	Full-time	Part-time
Total	77	88	34
<50	79	92	20
50+	77	86	38
Source: MEPS-IC			

Health Insurance Eligibility Rates: Washington (Averages for 2001-2003)									
	All Workers			Full-Time			Part-Time		
	All Firm Sizes	<50	50+	All Firm Sizes	<50	50+	All Firm Sizes	<50	50+
Agriculture	66	66	68	81	81	80	34	20	38
Manufacturing & mining	91	91	91	93	95	91	46	28	52
Construction	79	83	76	83	88	77	31	29	38
Utilities & transportation	84	86	83	90	94	88	34	23	61
Wholesale trade	88	89	89	93	95	90	31	24	32
Finance, insurance, real estate	87	87	87	92	94	90	51	27	56
Retail trade	64	76	61	83	91	80	31	16	33
Professional services	81	84	80	90	96	88	45	24	50
Other services	61	62	62	81	85	78	26	16	29
All Industries	77	79	77	88	92	86	34	20	38
Source: MEPS-IC									
Estimates assume variation in rates across industries is the same as that observed for the US.									



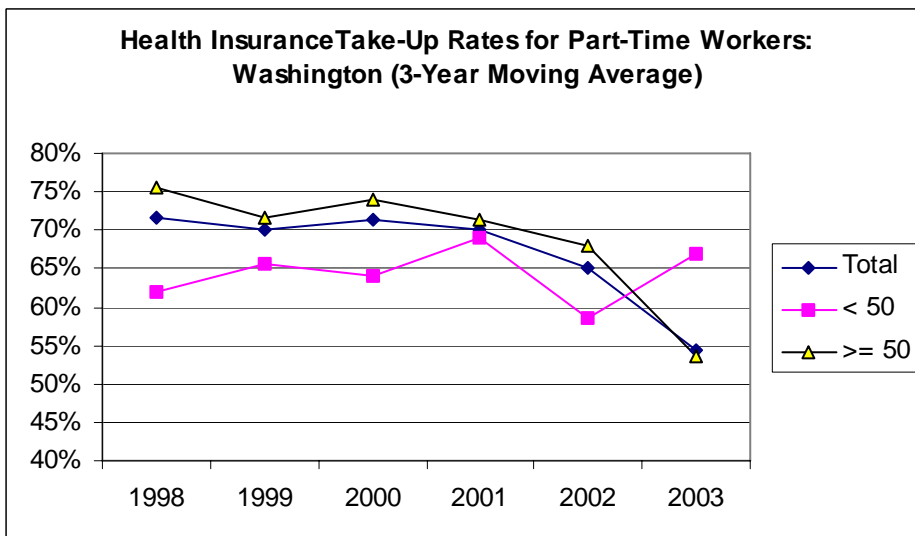
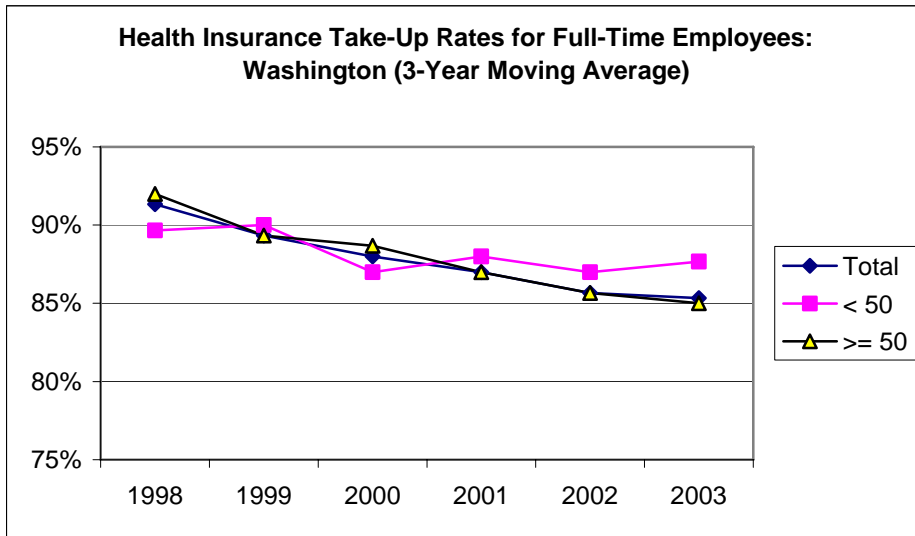
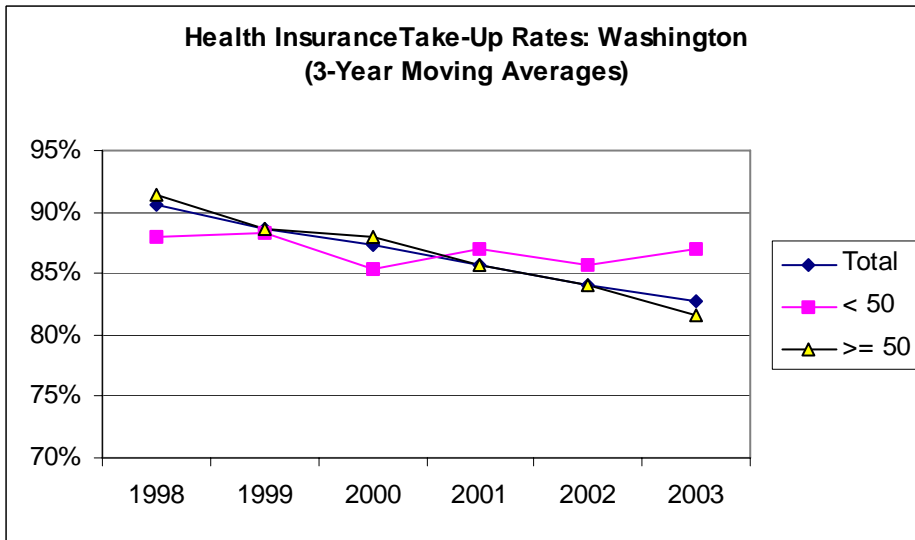
## Take-Up Rates

Table Reads: Among eligible employees, 83 percent are enrolled in health insurance.

Health Insurance Take-Up Rates Among Eligible Employees: Washington (Averages for 2001-2003)			
Firm Size	All Employees	Full-time	Part-time
Total	83	85	54
<50	87	88	67
50+	82	85	54
Source: MEPS-IC			

Health Insurance Take-Up Rates: Washington (Averages for 2001-2003)									
	All Workers			Full-Time			Part-Time		
	All Firm Sizes	<50	50+	All Firm Sizes	<50	50+	All Firm Sizes	<50	50+
Agriculture	83	90	82	84	89	83	74	99	74
Manufacturing & mining	91	88	90	90	89	91	65	70	70
Construction	82	88	81	82	88	82	72	93	71
Utilities & transportation	87	85	86	88	86	88	67	77	68
Wholesale trade	88	90	88	88	90	89	59	84	55
Finance, insurance, real estate	89	92	87	89	93	89	62	78	62
Retail trade	77	85	75	80	86	79	58	67	59
Professional services	84	88	83	86	90	86	65	70	67
Other services	70	80	67	75	84	74	30	54	27
All Industries	83	87	82	85	88	85	54	67	54
Source: MEPS-IC									
Estimates assume variation in rates across industries is the same as that observed for the US.									





## Eligibility, Take-up and Enrollment Rates by Wage Quartiles

Offer, Eligibility, Take-up and Enrollment Rates by Wage Quartiles: Washington (Averages for 2001-2003)				
	Wage Quartiles*			
	Lowest 25%	Second 25%	Third 25%	Highest 25%
Offer rates**	35.4	59.0	74.4	81.6
Enrollment rates	38.2	56.9	72.5	78.5
Eligibility rates	57.8	71.9	84.1	87.7
Take-up rates	65.8	79.1	86.2	89.5
Take-up: Full-time employees	75.1	81.6	88.0	89.8
Take-up: Part-time employees	***	56.2	66.8	83.3
<p>Source: MEPS-IC.</p> <p>* The wage quartiles used in this table are not comparable to those reported in other tables. The quartile thresholds used here were determined by the distribution of earnings across all employees in the US.</p> <p>**Percentage of <u>establishments</u> that offer health insurance. Note that these rates are not comparable to the offer rates reported in other tables, which refer to percentages of <u>firms</u> that offer insurance.</p> <p>*** Figure does not meet MEPS standard of reliability.</p>				

## Numbers Enrolled and Not Enrolled in Own Employer-Provided Health Insurance

Table Reads: Among all workers in private sector firms with two or more employees (including firms that do not offer insurance), 56 percent are enrolled in health coverage provided by their employer. Among those workers who are not enrolled, 42 percent are in small firms (<50) and 58 percent are in large firms. *Note that workers who are not enrolled in own-employer provided health insurance might receive coverage through other sources.*

Workers Enrolled and Not Enrolled in Own Employer-Provided Health Insurance: Washington State						
	Number Enrolled	Number Not Enrolled	Percent Enrolled	Percent Not Enrolled		Share of Workers Not Enrolled
All Firms	1,155,435	909,540	56%	44%		100%
Firm Size						
< 50	365,291	378,603	49%	51%		42%
50 +	790,144	530,937	60%	40%		58%
Wage Quartiles*						
Lowest 25% of firms	70,544	174,720	29%	71%		19%
Second 25% of firms	165,964	231,928	42%	58%		25%
Third 25% of firms	274,086	201,851	58%	42%		22%
Highest 25% of firms	644,773	301,011	68%	32%		33%
Industry**						
Agriculture	20,268	50,005	29%	71%		5%
Manufacturing & mining	217,895	62,513	78%	22%		7%
Construction	72,833	60,670	55%	45%		7%
Utilities & transportation	51,991	26,804	66%	34%		3%
Wholesale trade	78,844	28,720	73%	27%		3%
Finance, insurance, real estate	113,121	48,780	70%	30%		5%
Retail trade	128,018	165,157	44%	56%		18%
Professional services	336,468	184,541	65%	35%		20%
Other services	135,997	282,350	33%	67%		31%
<p>These estimates are for workers in private sector firms with two or more employees.</p> <p>* Wages refer to average wage (total wages divided by number of employees).</p> <p>** Agriculture includes forestry and fishing.</p> <p>Finance, insurance, real estate includes management of companies.</p> <p>Professional services includes information, professional and technical services, educational services and health care.</p> <p>Other services includes administrative services, arts/entertainment, accommodation and food services, and other services (except public administration)</p>						

Numbers of Full-Time and Part-Time Workers Enrolled and Not Enrolled in Own Employer-Provided Health Insurance:  
Washington State

	Enrolled		Not Enrolled		Percent Enrolled		Share of Workers Not Enrolled (%)	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
All Firms	1,065,893	67,215	530,258	401,609	67%	14%	57%	43%
Firm Size								
< 50	318,775	15,541	223,309	186,270	59%	8%	24%	20%
50 +	747,119	51,674	306,949	215,338	71%	19%	33%	23%
Wage Quartiles*								
Lowest 25% of firms	60,863	4,881	98,708	80,812	38%	6%	11%	9%
Second 25% of firms	146,137	12,476	130,510	108,769	53%	10%	14%	12%
Third 25% of firms	248,523	17,920	112,020	97,474	69%	16%	12%	10%
Highest 25% of firms	610,310	31,935	189,003	114,535	76%	22%	20%	12%
Industry**								
Agriculture	17,241	1,748	30,812	20,471	36%	8%	3%	2%
Manufacturing & mining	218,606	2,092	52,229	7,480	81%	22%	6%	1%
Construction	69,547	1,791	53,305	8,859	57%	17%	6%	1%
Utilities & transportation	48,199	2,718	17,553	10,326	73%	21%	2%	1%
Wholesale trade	75,912	1,598	22,008	8,045	78%	17%	2%	1%
Finance, insurance, real estate	108,601	4,718	34,546	14,035	76%	25%	4%	2%
Retail trade	107,062	15,868	76,906	93,339	58%	15%	8%	10%
Professional services	304,888	27,593	107,573	80,955	74%	25%	12%	9%
Other services	115,836	9,087	135,327	158,097	46%	5%	15%	17%

These estimates are for workers in private sector firms with two or more employees. Note that the sum of full-time and part-time workers enrolled (and not enrolled) are similar to, but not identical with, the estimated totals for all workers presented in the earlier table. The figures for full-time and part-time workers rely on additional assumptions and estimates for enrollment rates and employment patterns.

\* Wages refer to average wages (total wages divided by number of employees).

\*\* Agriculture includes forestry and fishing.

Finance, insurance, real estate includes management of companies.

Professional services includes information, professional and technical services, educational services and health care.

Other services includes administrative services, arts/entertainment/recreation, accommodation and food services, and other services (except public administration)

Workers Not Enrolled in Own Employer-Provided Health Insurance: Washington State				
	Wage Quartiles			
	Lowest 25% of firms	Second 25% of firms	Third 25% of firms	Highest 25% of firms
Agriculture, forestry, fishing				
Small Firms (< 50)	13,241	10,934	4,676	1,796
Large Firms (50+)	3,259	10,293	4,547	1,255
Manufacturing & mining				
Small Firms (< 50)	2,153	4,787	4,935	4,531
Large Firms (50+)	95	1,375	8,647	35,989
Construction				
Small Firms (< 50)	3,363	10,543	14,952	13,408
Large Firms (50+)	38	385	1,730	16,240
Utilities & transportation				
Small Firms (< 50)	1,010	2,442	2,976	2,975
Large Firms (50+)	335	1,705	4,053	11,307
Wholesale trade				
Small Firms (< 50)	1,183	2,480	3,462	7,428
Large Firms (50+)	391	1,385	2,283	10,107
Finance, insurance, real estate*				
Small Firms (< 50)	3,719	4,940	3,728	4,911
Large Firms (50+)	1,623	2,162	2,915	24,781
Retail trade				
Small Firms (< 50)	18,813	16,823	8,973	5,561
Large Firms (50+)	6,586	31,875	51,532	24,992
Professional services**				
Small Firms (< 50)	11,579	16,218	15,386	17,478
Large Firms (50+)	4,036	13,472	23,518	82,851
Other services***				
Small Firms (< 50)	69,408	40,496	16,559	10,704
Large Firms (50+)	33,889	59,612	26,979	24,697
Estimates are for private firms with two or more employees. *Finance, insurance, real estate includes management of companies. **Professional services includes information, professional and technical services, educational services and health care. ***Other services includes administrative services, arts/entertainment, accommodation and food services, and other services.				

## Other Sources of Health Insurance Coverage Among Employed Persons

The estimates presented in this report focus on own employer-provided health insurance. Workers not enrolled in plans provided by their employer may receive coverage through their spouses' employer, privately purchased insurance, or public plans. Our database suggests that 56 percent of workers are enrolled in health insurance provided by their own employer. The comparable estimate from *Current Population Survey* data for Washington is 58 percent. CPS data suggests that an additional 13 percent are covered through the employer of a family member. According to the *Washington State Population Survey*, 75 percent are covered by their employer or a family member's employer, 4 percent are covered through public programs, and 9 percent are covered through other insurance (e.g., self-purchased, military). That leaves 12 percent who are uninsured.

Estimates for Own-Employer Provided and Other Health Insurance Coverage: Washington State								
	Percent of Employed Persons Obtaining Health Insurance From Various Sources							
	Washington EHI Database	Washington CPS Data Data for 2004			2004 Washington State Population Survey			
	Own Employer	Own Employer	Other Employer	Own & Other	Own & Other Employer	Public Program*	Self-Purchased Military, Other	Uninsured
All Firms	56%	58%	13%	71%	75%	4%	9%	12%
Industry**								
Agriculture	29%	36%	9%	45%	57%	7%	10%	26%
Manufacturing & mining	78%	83%	5%	88%	88%	2%	3%	7%
Construction	55%	54%	5%	59%	63%	3%	9%	25%
Utilities & transportation	66%	71%	6%	77%	82%	2%	5%	10%
Wholesale trade	73%	55%***	17%***	72%***	85%	2%	8%	5%
Finance, insurance, real estate	70%	69%	10%	79%	82%	2%	10%	5%
Retail trade	44%	55%***	17%***	72%***	74%	6%	9%	10%
Professional services	65%	62%	13%	75%	80%	4%	10%	6%
Other services	33%	27%	22%	49%	58%	7%	12%	22%
<p>* Washington State Basic Health Program, Medicaid, Medicare</p> <p>** Agriculture includes forestry and fishing.</p> <p>Finance, insurance, real estate includes management of companies.</p> <p>Professional services includes information, professional and technical services, education and health care.</p> <p>Other services includes administrative services, arts/entertainment, accommodation and food, and other services (except public administration)</p> <p>Note that the industry-level estimates based on the CPS and State Population Survey have wide confidence intervals; this is due to relatively small sample sizes for some industries.</p> <p>*** CPS data reports for wholesale and retail trade combined.</p>								

## Health Insurance Premiums and Contributions

MEPS reports average premiums and contributions for three types of coverage—single, family, and employee-plus-one. The most recent data are for 2003. Premiums have, however, continued to increase dramatically over the past few years.<sup>4</sup> The estimates for 2005 reported below were constructed by applying the national rates of increase in premiums and employee contributions reported by the Kaiser/HRET *Employer Health Benefits Surveys*.

### Single Coverage

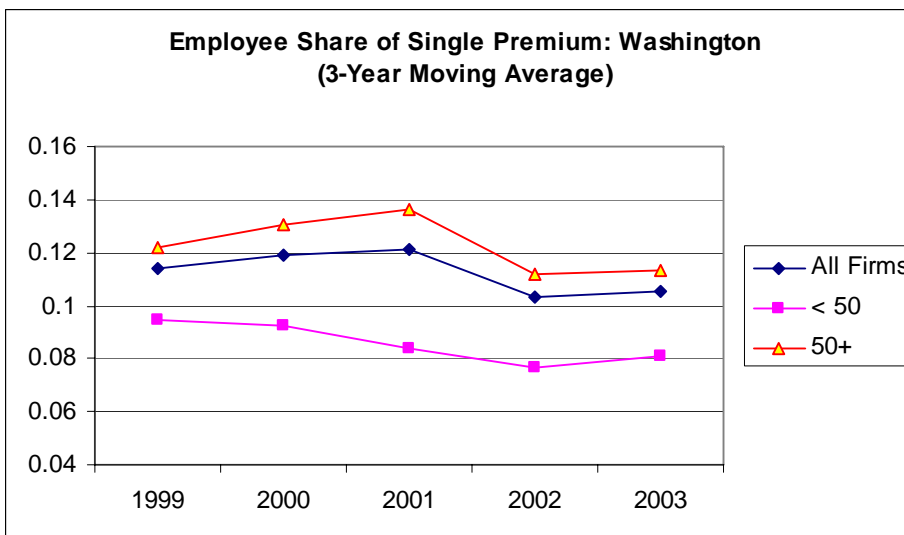
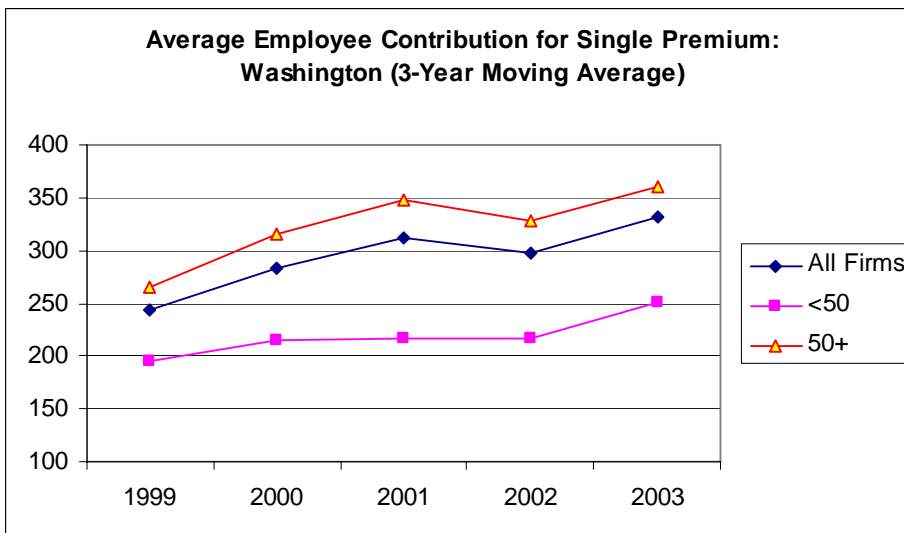
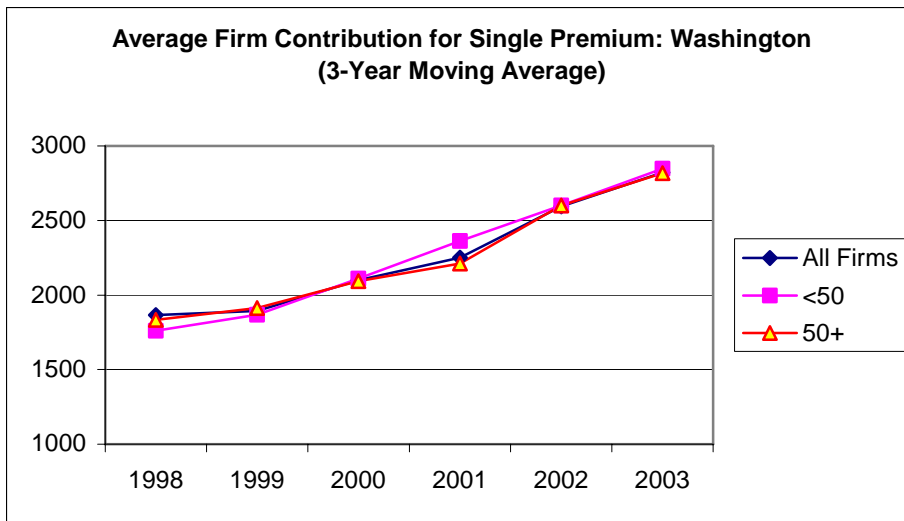
Employer-Provided Health Insurance Premiums for Single Coverage Three-Year Average (2001-03)				
	Total Premium	Employer Contribution	Employee Contribution	Employee Share
Washington				
All Firms	\$3,153	\$2,821	\$331	10%
<50 Employees	\$3,100	\$2,848	\$251	8%
50+ Employees	\$3,178	\$2,817	\$361	11%
1000+ Employees	\$3,082	\$2,731	\$351	11%
United States				
All Firms	\$3,186	\$2,630	\$556	17%
<50 Employees	\$3,343	\$2,853	\$490	15%
50+ Employees	\$3,139	\$2,562	\$577	18%
1000+ Employees	\$3,132	\$2,551	\$581	19%
Source: MEPS-IC Note: These are average premiums per enrollee.				

Employer-Provided Health Insurance Premiums for Single Coverage: Estimates for 2005				
	Total Premium	Employer Contribution	Employee Contribution	Employee Share
Washington				
All Firms	\$4,189	\$3,727	\$462	11%
<50 Employees	\$4,109	\$3,720	\$389	9%
50+ Employees	\$4,222	\$3,730	\$492	12%
1000+ Employees	\$4,144	\$3,565	\$578	14%
United States				
All Firms	\$4,142	\$3,415	\$727	18%
<50 Employees	\$4,311	\$3,666	\$646	15%
50+ Employees	\$4,091	\$3,339	\$752	18%
1000+ Employees	\$4,082	\$3,323	\$758	19%
Source: MEPS-IC, Kaiser/HRET Survey Estimates derived by extrapolating 2003 premiums reported by MEPS using premium increases reported for US in Kaiser/HRET surveys for 2004 and 2005.				

<sup>4</sup> According to the Kaiser/HRET *Employer Health Benefits Surveys*, average premiums increased by 13.9 percent from the spring of 2002 to the spring of 2003, by 11.2 percent from 2003 to 2004, and 9.2 percent from 2004 to 2005.

Employer Contributions to Health Insurance Premiums for Single Coverage: Three-Year Average (2001-03)			
	All Firms	<50	50+
Agriculture	\$2,611	\$2,659	\$2,416
Manufacturing & mining	\$2,859	\$2,695	\$2,837
Construction	\$2,716	\$2,619	\$2,650
Utilities & transportation	\$2,789	\$2,795	\$2,825
Wholesale trade	\$2,761	\$2,790	\$2,719
Finance, insurance, real estate	\$2,890	\$3,140	\$2,875
Retail trade	\$2,535	\$2,556	\$2,522
Professional services	\$3,015	\$3,079	\$2,997
Other services	\$2,735	\$2,842	\$2,696
All Industries	\$2,821	\$2,848	\$2,817
Source: MEPS-IC			
Estimates assume variation in premiums across industries is the same as that observed for US.			



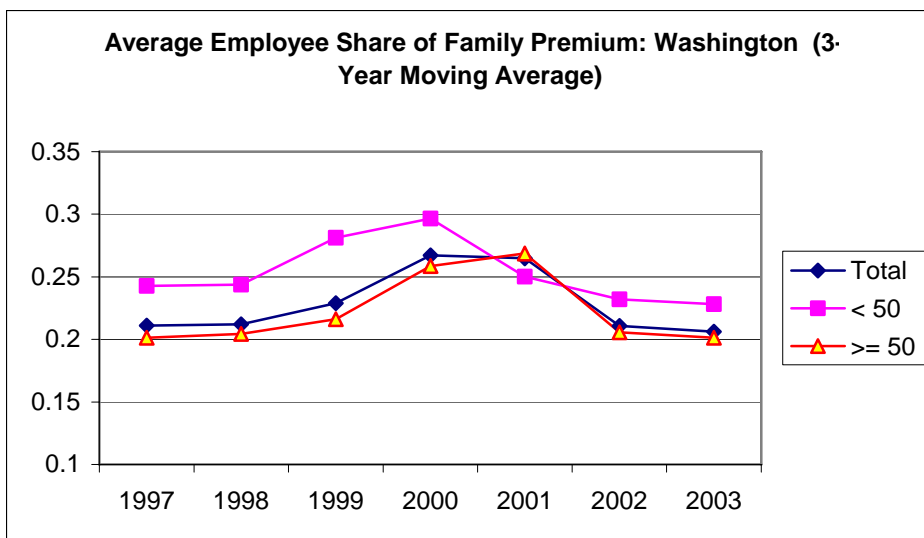
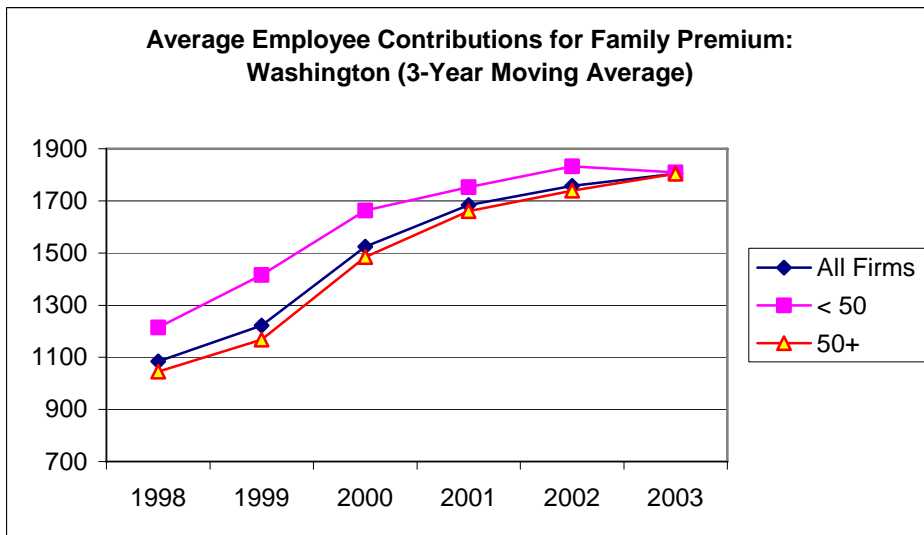
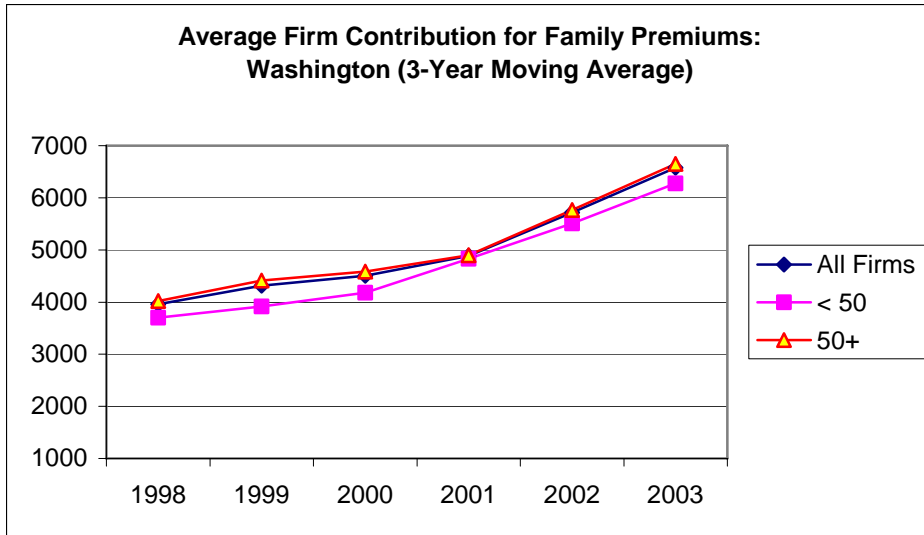


## Family Coverage

Employer-Provided Health Insurance Premiums for Family Coverage Three-Year Average (2001-03)				
	Total Premium	Employer Contribution	Employee Contribution	Employee Share
<b>Washington</b>				
All Firms	\$8,380	\$6,575	\$1,805	22%
<50 Employees	\$8,087	\$6,278	\$1,809	22%
50+ Employees	\$8,453	\$6,649	\$1,805	21%
1000+ Employees	\$8,318	\$6,659	\$1,659	20%
<b>United States</b>				
All Firms	\$8,409	\$6,405	\$2,003	24%
<50 Employees	\$8,509	\$6,281	\$2,228	26%
50+ Employees	\$8,390	\$6,429	\$1,961	23%
1000+ Employees	\$8,419	\$6,620	\$1,799	21%
Source: MEPS-IC Note: These are average premiums per enrollee.				

Employer-Provided Health Insurance Premiums for Family Coverage: Estimates for 2005				
	Total Premium	Employer Contribution	Employee Contribution	Employee Share
<b>Washington</b>				
All Firms	\$11,054	\$8,749	\$2,305	21%
<50 Employees	\$10,656	\$8,573	\$2,083	20%
50+ Employees	\$11,159	\$8,796	\$2,363	21%
1000+ Employees	\$10,865	\$8,672	\$2,193	20%
<b>United States</b>				
All Firms	\$11,099	\$8,542	\$2,557	23%
<50 Employees	\$11,185	\$8,392	\$2,793	25%
50+ Employees	\$11,082	\$8,571	\$2,511	23%
1000+ Employees	\$11,143	\$8,819	\$2,324	21%
Source: MEPS-IC, Kaiser/HRET Survey Estimates derived by extrapolating 2003 premiums reported by MEPS using premium increases reported for US in Kaiser/HRET surveys for 2004 and 2005.				

Employer Contributions to Health Insurance Premiums for Family Coverage: Three-Year Average (2001-03)			
	All Firms	<50	50+
Agriculture	\$6,198	\$6,376	\$5,691
Manufacturing & mining	\$6,867	\$6,213	\$6,965
Construction	\$6,130	\$6,017	\$6,125
Utilities & transportation	\$6,796	\$6,875	\$6,812
Wholesale trade	\$6,629	\$6,517	\$6,666
Finance, insurance, real estate	\$6,765	\$6,548	\$6,826
Retail trade	\$5,706	\$5,370	\$5,801
Professional services	\$6,744	\$6,554	\$6,798
Other services	\$6,165	\$6,426	\$6,098
All Industries	\$6,575	\$6,278	\$6,649
Source: MEPS-IC Estimates assume variation in premiums across industries is the same as that observed for US.			



## Employer-Plus-One Coverage

Data on employer-plus-one premiums are only available beginning in 2001.

Employer-Provided Health Insurance Premiums for Employee-Plus-One Coverage: Washington Three-Year Average (2001-03)				
	Total Premium	Employer Contribution	Employee Contribution	Employee Share
Washington				
All Firms	\$6,037	\$4,831	\$1,206	20%
<50 Employees	\$5,850	\$4,610	\$1,241	21%
50+ Employees	\$6,078	\$4,878	\$1,200	20%
1000+ Employees	\$5,900	\$5,025	\$875	15%
United States				
All Firms	\$6,051	\$4,762	\$1,289	21%
<50 Employees	\$6,260	\$4,782	\$1,478	24%
50+ Employees	\$6,010	\$4,757	\$1,253	21%
1000+ Employees	\$5,960	\$4,861	\$1,099	18%
Source: MEPS-IC Note: These are average premiums per enrollee.				

Employer-Provided Health Insurance Premiums for Employee-Plus-One Coverage: Estimates for 2005				
	Total Premium	Employer Contribution	Employee Contribution	Employee Share
Washington				
All Firms	\$7,829	\$6,227	\$1,602	20%
<50 Employees	\$7,210	\$6,083	\$1,127	16%
50+ Employees	\$8,005	\$6,268	\$1,737	22%
1000+ Employees	\$7,729	\$6,356	\$1,373	18%
United States				
All Firms	\$7,976	\$6,210	\$1,766	22%
<50 Employees	\$8,116	\$6,114	\$2,001	25%
50+ Employees	\$7,952	\$6,226	\$1,726	22%
1000+ Employees	\$7,882	\$6,339	\$1,542	20%
Source: MEPS-IC, Kaiser/HRET Survey Estimates derived by extrapolating 2003 premiums reported by MEPS using family premium increases reported for US in Kaiser/HRET surveys for 2004 and 2005. Note that the Kaiser/HRET surveys do not report employee-plus-one premiums.				

Employer-Provided Health Insurance Premiums for Employee-Plus-One Coverage: Washington Three-Year Average (2001-03)			
	All Firms	<50	50+
Agriculture	\$4,533	\$4,610	\$4,234
Manufacturing & mining	\$4,976	\$4,415	\$5,067
Construction	\$4,414	\$4,184	\$4,452
Utilities & transportation	\$5,135	\$4,901	\$5,182
Wholesale trade	\$4,639	\$4,502	\$4,663
Finance, insurance, real estate	\$4,894	\$5,022	\$4,895
Retail trade	\$4,277	\$4,047	\$4,328
Professional services	\$5,000	\$4,885	\$5,027
Other services	\$4,675	\$4,874	\$4,631
All Industries	\$4,831	\$4,610	\$4,878
Source: MEPS-IC Estimates assume variation in premiums across industries is the same as that observed for US.			

## A Note on Employee Contributions

Employee contributions in Washington tend to be smaller than the national average, especially for single coverage. One reason is that relatively high percentages of enrollees in Washington are not required to contribute. The average employee contributions reported by *MEPS* include data for workers who do not contribute.

Employee Health Care Contributions: Washington and the US Three-Year Average (2001-03)* Among enrollees, the percentage that are <u>not</u> required to contribute toward premiums for:			
	Single Coverage	Family Coverage	Employee- Plus-One Coverage
Washington			
All Firms	50%	27%	15%
<50 Employees	73%	46%	30%
50+ Employees	41%	22%	11%
United States			
All Firms	28%	15%	10%
<50 Employees	56%	41%	27%
50+ Employees	19%	10%	7%
* Figures for Employee-Plus-One are for 2003, rather than averages for 2001-03. Source: MEPS-IC			

Employee Health Care Premium Contributions: Washington Three-Year Averages (2001-03)		
Average contributions including and excluding enrollees that are not required to contribute		
	Enrollees with zero contributions:	
Coverage	Included	Excluded
Single	\$331	\$662
Family	\$1,805	\$2,473
Employee-Plus-One	\$1,206	\$1,419
Source: Estimated using data from MEPS-IC		

## Employer Health Insurance Expenditures

Table Reads: Private sector firms with two or more employees spent roughly \$4.9 billion on health insurance premiums during 2002. The average expenditure per worker across all firms was \$1,721. Among firms that did offer health insurance, the average expenditure per worker was \$2,779. Not all workers are enrolled, even in firms that offer coverage, so the average expenditure per enrollee was higher (\$4,014). Among all firms, health care expenditures averaged about 7 percent of total wages paid.<sup>5</sup> Among firms that offer health coverage, expenditures averaged 11 percent of total wages paid.

Employer Health Insurance Expenditures: Washington State (2002)						
	Total Expenditures (\$ millions)	Average Expenditure Per Worker (\$)		Average Expenditure Per Enrollee (\$)	Ratio of Expenditure to Total Wages (%)	
		All Firms	Firms That Offer		All Firms	Firms That Offer
All Firms	4,944	1,721	2,779	4,014	7%	11%
Firm Size						
< 50	1,455	1,667	2,789	3,985	7%	12%
50 +	3,489	2,565	2,687	4,298	9%	9%
1000+	1,315	2,555	2,674	4,303	7%	8%
Wage Quartiles*						
Lowest 25% of firms	282	732	2,507	3,946	7%	26%
Second 25% of firms	671	1,328	2,608	3,968	8%	15%
Third 25% of firms	1,142	2,167	2,805	4,003	8%	10%
Highest 25% of firms	2,849	2,656	2,941	4,072	5%	6%
Industry**						
Agriculture	82	777	2,408	4,110	4%	13%
Manufacturing & mining	1,026	2,667	3,325	4,116	10%	12%
Construction	288	1,553	2,841	3,882	5%	10%
Utilities & transportation	241	1,972	3,137	4,325	7%	11%
Wholesale trade	335	2,768	3,223	4,043	8%	9%
Finance, insurance, real estate	510	2,342	3,433	4,323	9%	13%
Retail trade	465	1,245	2,184	3,483	7%	12%
Professional services	1,465	2,315	3,046	4,157	9%	12%
Other services	532	931	1,935	3,940	5%	11%
<p>These estimates are for private sector firms with two or more employees.  Averages refer to averages across firms.  * Wages refer to average wage (total wages divided by number of employees).  ** Agriculture includes forestry and fishing.  Finance, insurance, real estate includes management of companies.  Professional services includes information, professional and technical services, educational services and health care.  Other services includes administrative services, arts/entertainment, accommodation and food services, and other services (except public administration)</p>						

<sup>5</sup> According to data from the US Department of Labor's *Employer Costs for Employee Compensation 2002*, the ratio of health insurance costs to wages and salaries was 7.7 percent in the West. These estimates are for firms with one or more employee, and salaries do not include overtime or lump sum payments.



Health insurance premiums have increased substantially since 2002. The most recent estimates for premiums and employer contributions in Washington are for 2003 (reported in *MEPS*). Applying national rates of increase (reported in the Kaiser/HRET surveys) to Washington allows us to roughly estimate expenditures in 2005.

Employer Health Insurance Expenditures in Washington State: Estimates for 2005*						
	Total Expenditures (\$ millions)	Average Expenditure Per Worker (\$)		Average Expenditure Per Enrollee (\$)	Ratio of Expenditure to Total Wages (%)	
		All Firms	Firms That Offer		All Firms	Firms That Offer
All Firms	6,553	2,307	3,726	5,381	8%	14%
Firm Size						
< 50	1,955	2,238	3,745	5,351	na	na
50 +	4,598	3,381	3,541	5,665	na	na
Wage Quartiles**						
Lowest 25% of firms	375	982	3,363	5,292	na	na
Second 25% of firms	890	1,780	3,497	5,318	na	na
Third 25% of firms	1,516	2,907	3,763	5,369	na	na
Highest 25% of firms	3,771	3,559	3,941	5,455	na	na
Industry***						
Agriculture	109	1,046	3,242	5,533	na	na
Manufacturing & mining	1,356	3,575	4,457	5,516	na	na
Construction	384	2,091	3,823	5,223	na	na
Utilities & transportation	319	2,648	4,211	5,804	na	na
Wholesale trade	446	3,716	4,327	5,427	na	na
Finance, insurance, real estate	675	3,139	4,600	5,790	na	na
Retail trade	617	1,668	2,926	4,663	na	na
Professional services	1,940	3,099	4,078	5,565	na	na
Other services	706	1,247	2,592	5,278	na	na
<p>Estimates are for private sector firms with two or more employees.  Averages refer to averages across firms.  * These are rough estimates for 2005. They were derived by inflating the premiums and employee contributions for Washington (reported by MEPS) by the rate of premium and contribution increases observed nationally (as reported by Kaiser/HRET surveys). The expenditure to wage ratio for 2005 was estimated by increasing total wages paid by 7.4 percent (which is the increase observed from 2002Q1 to 2005Q1 for Washington in <i>Quarterly Census of Employment and Wages</i> data.  ** Wages refer to average wage (total wages divided by number of employees).  *** Agriculture includes forestry and fishing.  Finance, insurance, real estate includes management of companies.  Professional services includes information, professional and technical services, educational services and health care.  Other services includes administrative services, arts/entertainment, accommodation and food services, and other services (except public administration)</p>						

## Employee Health Care Contributions

Table Reads: Washington workers contributed on average an estimated \$808 for health care coverage during 2002; this amounted to 17 percent of total premiums. Note that this estimate represents a weighted average across different types of coverage (single, family, employee-plus-one).

Employee Health Insurance Contributions: Washington State 2002 (Estimated contributions among workers in private sector firms with two or more employees that offer coverage)			
	Total Contributions (\$ millions)	Average Contribution Per Enrollee (\$)	Worker Share of Health Care Premiums
All Firms	1,054	808	17%
Firm Size			
< 50	289	789	17%
50 +	765	989	19%
Industry*			
Agriculture	15	686	14%
Manufacturing & mining	179	777	16%
Construction	68	859	18%
Utilities & transportation	43	764	15%
Wholesale trade	66	729	15%
Finance, insurance, real estate	115	849	16%
Retail trade	133	977	22%
Professional services	307	787	16%
Other services	127	768	16%
<p>Averages refer to averages across firms.</p> <p>* Agriculture includes forestry and fishing.</p> <p>Finance, insurance, real estate includes management of companies.</p> <p>Professional services includes information, professional and technical services, educational services and health care.</p> <p>Other services includes administrative services, arts/entertainment, accommodation and food services, and other services (except public administration)</p>			

Health insurance premiums have increased substantially since 2002. The most recent estimates for premiums and employee contributions in Washington are for 2003 (reported in *MEPS*). Applying national rates of increase (reported in the Kaiser/HRET surveys) allows us to roughly estimate employee contributions in 2005.

Employee Health Insurance Contributions in Washington State: 2005 Estimates* (Estimated contributions among workers in private sector firms with two or more employees that offer coverage)			
	Total Contributions (\$ millions)	Average Contribution Per Enrollee (\$)	Worker Share of Health Care Premiums
All Firms	1,372	961	15%
Firm Size			
< 50	337	922	15%
50 +	1,035	1,338	19%
Industry**			
Agriculture	19	800	13%
Manufacturing & mining	236	924	14%
Construction	85	1,002	16%
Utilities & transportation	57	914	14%
Wholesale trade	83	855	14%
Finance, insurance, real estate	150	991	15%
Retail trade	173	1,166	20%
Professional services	401	935	14%
Other services	167	943	15%
<p>Averages refer to averages across firms.</p> <p>* These are rough estimates for 2005. They were derived by inflating the 2003 premiums and employee contributions for Washington (reported by MEPS) by the rate of premium and contribution increases observed nationally (as reported by Kaiser/HRET surveys). These inflated premiums and contributions were then applied to the enrollments estimated for 2002.</p> <p>** Agriculture includes forestry and fishing.</p> <p>Finance, insurance, real estate includes management of companies.</p> <p>Professional services includes information, professional and technical services, educational services and health care.</p> <p>Other services includes administrative services, arts/entertainment, accommodation and food services, and other services (except public administration)</p>			

## Appendix I: Heath Care Offer Analysis

Logistic regressions were estimated to examine the effects of firm size, average wage levels, and industry on the probability that firms offer health insurance to full-time employees, part-time employees, and their dependents. These regressions were estimated using data for about 6,700 firms in the health insurance database that responded to the *2004 Employee Benefits Survey*.

These variables do a good job in predicting the offer status of firms, especially with respect to offers to full-time employees and their dependents. The probability that firms offer insurance to employees (both full-time and part-time) and dependents increases significantly with firm size and average wages. The impact of higher wages can offset firm-size effects, and offer rates are high among small, high-wage firms. Industry effects persist even after controlling for number of employees and wage levels.

Employer Health Insurance Offer Status: Logistic Regressions									
	Offer to full-time employees			Offer to part-time employees		Offer to full-time dependents		Offer to part-time dependents	
Variable	Coefficient		Chi-Square	Coefficient		Chi-Square	Coefficient		Chi-Square
Intercept	-1.592	*	164.39	-1.924	*	307.37	-1.753	*	253.43
Number of employees	0.018	*	157.64	0.002	*	75.74	0.009	*	128.01
Average wage	0.00010	*	551.63	0.00001	*	39.20	0.00008	*	559.90
								*	
Agriculture	-1.160	*	45.47	-1.429	*	22.10	-0.711	*	19.14
Consruction	-0.672	*	27.26	-0.385	*	7.20	-0.179		2.42
Manufacturing	0.653	*	9.64	0.077		0.24	0.896	*	27.89
Wholesale trade	0.568	*	8.24	-0.153		0.88	0.744	*	21.24
Retail trade	0.233		2.88	-0.383	*	6.05	0.291	*	5.63
Transportation, utilities	0.046		0.03	-0.156		0.41	0.314		1.99
Information	0.822		3.12	0.392		2.22	0.896	*	5.46
Finance, insurance	0.076		0.09	0.720	*	15.37	0.197		0.91
Real estate	0.280		2.40	-0.323		2.32	0.225		1.91
Professional/technical services	0.538	*	9.85	0.486	*	12.11	0.312	*	4.93
Administrative services	-0.163		0.79	-0.223		1.20	-0.020		0.01
Educational services	0.432		1.05	1.032	*	11.00	0.827	*	4.97
Healthcare and social services	0.723	*	23.48	0.808	*	38.66	0.440	*	12.93
Arts, entertainment, recreation	0.728	*	5.89	-0.461		1.71	0.907	*	11.66
Accommodations and food	-0.193		1.61	-0.456	*	5.50	0.005		0.00
								*	
Model Statistics									
Likelihood Ratio Chi-Square	1958.1			463.7			1846.2		474.5
Percent concordant pairs	86.5			69.0			83.5		70.4
Somer's D	0.733			0.387			0.671		0.415

The omitted (reference) industrial category is 'other services' (which includes personal care, household, and repair services).

The average wage is the total wages paid divided by the number of employees.

\* indicates the coefficient is significant at 5 percent level.

Estimates based on 6672 observations without missing data.

## Appendix II: Database Construction and Imputation Methodology

There were several steps in the imputation of health care offers and expenditures for firms in the *2002 Business Tax & Premium Database*. Offer rate information from the *2004 Employee Benefits Survey* and enrollment rate and insurance premium information from the *Medical Expenditure Panel Survey—Insurance Component (MEPS-IC)* were incorporated into the database.

### Step 1: Restrict the database to private sector firms with at least 2 employees

The *Business Tax & Premium Database* contains records for over 300,000 firms; a high proportion of these firms are sole proprietorships and single-employee firms. Health insurance offer information, however, is available for only a subset of these firms. The *Employee Benefits Survey* data are for private sector firms with two or more employees, and the database had to be restricted to this population. Firms with fewer than two employees and public sector employers were excluded.<sup>6</sup> Federal, state and local government agencies, public boards, school districts, and public universities were removed from the database. Nonprofit organizations, however, were not excluded. These restrictions resulted in a population of 94,398 firms.

### Step 2: Merging data from the *2004 Employee Benefits Survey*

The *Employee Benefits Survey* is a survey of firms, rather than establishments (i.e., a firm with multiple locations is treated as one company). A total of 9,246 firms responded to the survey; a response rate of 58 percent. Respondents provided information on health care offers to full-time employees, part-time employees, and dependents.

The Labor Market and Economic Analysis Branch of the Employment Security Department was able to assign UBI numbers (a firm identifier) to 7,359 survey respondents. The reported offer status for 7,140 of these firms was merged into the health insurance database by using these UBI numbers.

### Step 3: Imputing the insurance offer status of firms

Among the 94,398 private sector firms with two or more employees in the *Business Tax & Premium Database*, we observed the insurance offer status of 7,140 firms that responded to the *Employee Benefits Survey*. The offer status of the remaining firms had to be imputed.

The analysis described above suggests that this imputation should take into account firm size, average wage levels and industry. Firms were stratified according to these three characteristics. The strata included:

- 5 firm size categories (2-9, 10-24, 25-49, 50-99, 100+)
- 16 industry categories (based on 2-digit NAICS)
- 4 wage quartiles (based on average wages paid by firms)<sup>7</sup>

---

<sup>6</sup> The public sector was excluded by removing employers in the public administration (NAICS code 92) and those with property tax exemptions (such as public schools and local government agencies).

<sup>7</sup> The wage quartile thresholds were less than \$13,044, \$13,044 to \$21,774, \$21,774 to \$34,020, and greater than \$34,020. Note that these thresholds are relatively low, at least in part, because wage and employment data include part-time and sporadic employment. Our data do not allow us to estimate wages on a full-time equivalent basis.

Due to small sample sizes within strata, some cells were combined; a total of 194 strata were defined. Offer rates for firms within these strata were estimated using information from the firms that responded to the *Employee Benefits Survey*. Offer statuses for the remaining firms were randomly assigned, so as to achieve the targeted offer rate for each of the strata.

This procedure produced offer rates that are comparable to those reported in the 2004 *Employee Benefits Survey* report. The validity of the procedure ultimately depends upon how representative are the survey responses. The *Benefits Survey* had a response rate of 58 percent, but there is no evidence of substantial response bias. The estimated offer rates, as noted on page 5 of this report, are comparable to national estimates reported in the Kaiser/HRET 2004 *Employer Health Benefits Survey*. The estimated rates for small firms (under 50) are lower than those reported for Washington by *MEPS*, but the *MEPS* rates are not strictly comparable. The *MEPS* sample includes firms with only one employee, for whom offer rates tend to be lower, and the reported offer rates are for establishments rather than firms.

We also investigated the potential for bias by examining survey response by average wage levels. The *Benefits Survey* sample was stratified by firm size and industry, not wage level. Among firms responding to the survey that are included in the *Tax & Premium Database*, however, we can examine the extent to which low-wage firms are under-represented. This is important because low-wage firms are less likely to offer insurance.

In fact, low-wage firms were less likely to respond to the survey, but not dramatically so. Moreover, adding wage levels to the stratification scheme mitigates the impact of response bias on estimated offer rates. If you apply sampling weights that are based only on firm size and industry strata to inflate survey responses to population estimates, only 20 percent of firms (instead of the actual 25 percent) would be in the lowest wage quartile, and the overall offer rate across all firms would be 64 percent. Applying weights that take into account average wage levels, in addition to firm size and industry, reduces the overall offer rate estimate to 62 percent.

#### Step 4: Imputing health insurance enrollment in firms

The *Medical Expenditure Panel Survey—Insurance Component* provides information on enrollment rates and insurance premiums. This annual survey of firms is conducted by the Agency for Healthcare Research and Quality, which is part of the U.S. Department of Health and Human Services.<sup>8</sup> AHRQ publishes estimates for most states, including Washington. The typical sample for a state includes 825 firms, and response rates typically range from 70 to 75 percent. So, estimates for a given year are based on about 600 firms (of which about 60 percent would offer insurance). The survey sample includes private sector firms with one or more employee.

Data are currently available from 1996 to 2003. Published tables provide enrollment rates, eligibility and take-up rates, and premiums by firm size and industry groups. Due to sample size limitations, the categories are less detailed than those presented by the *Employee Benefits Survey*. Estimated rates are also presented for full-time and part-time workers.

*MEPS* is a rich source of data, but some discretion is required in using estimates at the state level. Relatively small sample sizes can lead to large standard errors and estimates can fluctuate from year to year. In order to mitigate this, we use three-year moving averages for rates and premiums. For example, the estimates for 2002 presented in this report, are based on averages for 2001 through 2003. We also restrict the use of state-level estimates to relatively high levels of aggregation—estimates for all firms, firms with fewer than 50 employees, and firms with 50 or more employees. In order to allow for variation in rates and premiums by industry, we use the variation by industry that is observed nationally.

Consider, for example, enrollment rates. The enrollment rate is the percent of total employees in a firm that are enrolled in health insurance, among those firms that offer coverage. This report uses *MEPS* data for Washington to estimate the three-year average offer rate for all firms, for firms with fewer than 50 employees, and for firms with 50 or more employees. These are the highlighted rates for ‘all industries’ in the table presented on the next page. The other estimates in this table were generated by allowing enrollment rates to vary across industries in the pattern observed for the U.S., controlling for the Washington totals.

Enrollments were estimated by multiplying total employment in a firm by the relevant firm size-industry specific enrollment rate. (Enrollment was set to zero in firms that do not offer coverage.) A similar approach was used to estimate eligibility and take-up numbers. The eligibility rate is the percentage of employees who are eligible for insurance, among firms that offer coverage. The take-up rate is the percentage of eligible employees that enroll in coverage.

---

<sup>8</sup> The U.S. Census Bureau administers the survey for AHRQ.

Health Insurance Enrollment Rates (Averages for 2001-2003)			
Washington State			
	All Workers		
	All Firm Sizes	<50	50+
Agriculture	56	59	54
Manufacturing & mining	82	81	80
Construction	65	74	60
Utilities & transportation	73	73	70
Wholesale trade	78	80	76
Finance, insurance, real estate	77	80	74
Retail trade	49	65	45
Professional services	68	74	66
Other services	43	50	41
All Industries	64	69	62
Source: MEPS-IC			
Estimates assume the variation in rates across industries is the same as that observed for the US.			

*MEPS* reports enrollment, eligibility, and take-up rates for all employees, full-time employees, and part-time employees. This report presents estimated enrollment among full-time and part-time workers. These estimates are less reliable than those for all workers, because they rely on imputed levels of part-time employment across firms. Information on full-time and part-time employment is not included in the *Tax & Premium Database*; the Employment Security Department does not report these data. *MEPS* does report part-time employment shares by industry and firm size, and we used these data to impute full and part-time employment for firms in the database.

#### Step 5: Imputation of employer and employee health insurance expenditures

*MEPS* reports state-level estimates for total health insurance premiums, employee contributions, and employer contributions for three types of coverage—single, family and employee-plus-one. *MEPS* also report estimates of the percentages of enrollees who are in single, family and employee-plus-one coverage. Premiums, contributions, and enrollment patterns are allowed to vary by firm size and industry. (See the table on page 22 of this report for an example of these data.)

Multiplying enrollments in the three types of coverage by the relevant employer premiums provides estimates of health expenditures for those firms that offer coverage. Enrollments, and thus expenditures, are set to zero for firms that do not offer. Employee health insurance contributions were estimated using a similar approach.



Employer health insurance expenditure =  
(total enrolled)\*(percent in single coverage)\*(employer premium for single coverage) +  
(total enrolled)\*(percent in family coverage)\*(employer premium for family coverage) +  
(total enrolled)\*(percent in employee-plus-one coverage)\*(employer premium for employee-plus-one coverage)

According to our estimates for 2002, employer health care expenditures across all firms were on average equal to 7 percent of total wages. This estimate is consistent with data reported in the U.S. Department of Labor's *Employer Costs for Employee Compensation 2002*. According to Department of Licensing (DOL) estimates, the ratio of health insurance costs to wages and salaries was 7.7 percent in the Western region.<sup>9</sup>

---

<sup>9</sup> Note that the DOL estimates are for firms with one or more employee, and DOL data on salaries do not include overtime or lump sum payments.